ENTOMOLOGICAL NEWS

Vol. LXXI APRIL, 1960 No. 4

A Note on the Genus Lucernuta Castelnau and a New Species. (Coleoptera; Lampyridae)

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Kirby (1818) described two new lampyrids from Brazil as *Lampyris illigeri* and *L. savignii,* and although he said they were related, the descriptions strongly suggest that they are not congeneric. In 1833 Castelnau erected *Lucernuta* as a division of his supergenus *Photinus,* and listed *fenestrata* Germar, *thoracicus* G. A. Oliv., *laticornis* Fabr., *discoidalis* Cast., and *bicolor* Fabr., as species. Of these, *thoracicus, laticornis* (= *atra* G. A. Oliv.), and *discoidalis* are now listed in *Lucidota,* and *bicolor* in *Pyrocoelia* (E. Olivier, 1907, 1910, 1911). Motschulsky (1853a) erected the genera *Lychnocrepis* and *Strongylomorphus,* with species now listed in *Pyrocoelia;* under *Lucernuta* he gave *fenestrata* as the type (1853b, c) and mentioned *savignii* as belonging in this genus. Lacordaire (1857) gives a more complete description of *Lucernuta* than that of Castelnau, lists *fenestrata,* and suggests that it may be a variety of *savignii.* Neither Motschulsky nor Lacordaire mention *illigeri* under *Lucernuta,* but the former (1854d) suggests that it may be *Megalophthalmus.* Lacordaire's description of *Lucernuta* differs but little from that of *Cratomorphus,* except for the longer antennae of the former.

Gorham (1880, p. 15) gives only *fenestrata* under *Lucernuta,* but (p. 91) established the genus *Pyrocoelia* for the somewhat similar Asian species known to him, and including *bicolor* Fabr., but not Motschulsky's species of *Strongylomorphus* and *Lychnocrepis.* E. Olivier (1907; 1910) included *Pyrocoelia* under *Lucernuta* and added Motschulsky's species (although

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Gorham said his *Pyrocoelia* was not congeneric with any of Motschulsky's divisions), but in 1911a he gave a distinction between *Lucernuta* and *Pyrocoelia* which he maintained in his revision of the family (1911b). It is odd that in his 1910 list, Olivier gives *fenestrata* as a synonym of *illigeri* instead of *savignii;* if a synonym of either, it must be of the latter.

Through the courtesy of the British Museum (Natural History) I have had an opportunity to examine specimens of both of Kirby's species which had been compared with the types; both were males. As a result of this examination it is evident that *illigeri* actually belongs in *Cladodes,* and thus becomes *Cladodes illigeri* (Kirby). *L. savignii* is very close to *Cratomorphus,* and if it were a newly-discovered species would probably have been so classified. It is a considerably larger insect (20 mm. long) than *L. hammari* or the other two recent species listed below, and with a distribution of the luminous tissue resembling that of some species of *Cratomorphus;* it has, however, the broad body form and relatively long antennae of *Lucernuta.* As noted by Lacordaire, *Cratomorphus* is divisible into groups, and there might be doubts as to whether *Lucernuta* is really different from *Cratomorphus.* For the present it seems best to allow *Lucernuta* to stand as a valid genus. Whether or not *fenestrata* is a synonym of *savignii* cannot be decided; *savignii* has priority over *fenestrata* and while the descriptions by Kirby and Germar are not directly comparable, Lacordaire's suggestion of varietal difference seems plausible.

Pic (1930) described a new species, *Lucernuta minuta,* and I (1959) added *L. hammari.* Another new species has recently been received by me and is described below. The accompanying figure shows its considerable resemblance to *L. hammari.* A picture of *L. savignii* is shown for comparison.

Lucernuta paraguayensis n. sp.

Type locality, Honehan, PARAGUAY; December 1957; no collector's name.

Material examined, two males, one slightly smaller than the other.

Type in the collection of the U. S. National Museum, Washington, D. C.

Size, 13.45 mm. long by 6.2 mm. broad. Outline broadly elliptical.

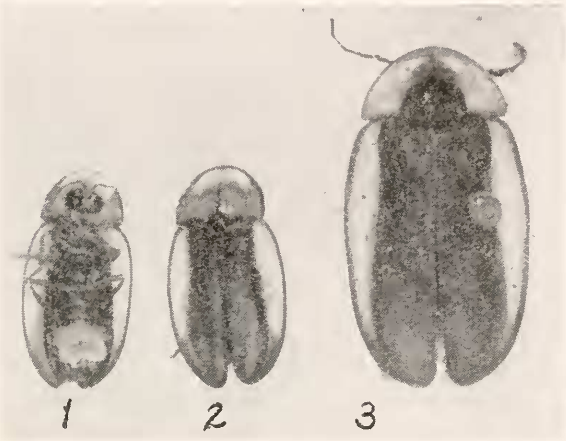

Fig. 1. *Lucernuta paraguayensis;* venter of paratype. Actual length 13.2 mm.
Fig. 2. *Lucernuta paraguayensis,* dorsum of type. Actual length 13.45 mm.
Fig. 3. *Lucernuta savignii;* dorsum. Actual length 21.1 mm. British Museum specimen.

Pronotum 3.75 mm. long by 4.85 mm. broad, semi-elliptical; posterior angles obtuse, rounded; low median longitudinal carina from base to apex; brownish inflated area over eyes, with two small transparent spots near the apical margin; lateral extensions flat, pale brownish, closely punctate; disk convex, finely punctulate; extreme edges narrowly brown and slightly reflexed in apical third; short yellow pubescence, especially noticeable on the sides of the disk; an irregularly pentagonal or subquadrate orange-red spot in median third and basal half of pronotum.

Scutellum black, glistening, apex acute. Mesonotal plates dull dark reddish brown.

Elytra 9.7 mm. long by 3.1 mm. broad, widest at about basal third, narrowing slightly toward apices; lateral margins pale, translucent, somewhat deflexed, *ca.* 1.0 mm. wide at basal third, narrowing posteriorly and becoming indistinct at about apical fourth; extreme lateral edges brown; convex over body, coarsely rugose-punctate; color over body translucent brown but appearing nearly black over wings; primary pubescence short, pale, not dense; secondary pubescence very short and dense.

Frons dark brown, very concave; eyes very large, *ca.* 2.25 mm. across in frontal aspect, and 0.45 mm. between them above antennal sockets; not contiguous beneath. Mandibles very small, directed postero-ventrally as in *L. hammari*.

Antennae 4.5 mm. long, approximately $\frac{1}{3}$ body length; brown, hairy, tapering, slightly compressed, not serrate; 1st article long, 2nd very short, 3 to 10 diminishing in width and slightly in length; sockets contiguous.

Prosternum pink, margin sinuate; mesosternum reddish brown; metasternum dark reddish brown.

Pygidium trilobed, the median lobe short and rounded, the lateral lobes longer and acute.

Ventral segments 2 to 5 dark brown, 5 with a narrow pale posterior edge. 6 and 7 entirely luminous and 2 times as long as the 5th; somewhat emarginate medially. 8 short and narrow, deeply emarginate. 9 ogival, dark brown. Tergites 5, 6, and 7 have short, posteriorly directed, lateral lobes.

Legs brown; claws simple.

Aedeagus like that of *L. hammari*.

One paratype, ♂, same locality; 13.2 mm. long and proportionately slightly narrower; ventral segment 4 medially pale. In the collection of the Academy of Natural Sciences of Philadelphia.

In my description of *L. hammari* the abdominal spiracles were noted as "dorsal"; this was a mistake, as they are actually located on the antero-lateral corners of the ventral segments, as they are also in *L. paraguayensis*. As has been found in several species of *Cratomorphus*, they are hidden under the posterior edge of the preceding segment and are thus not seen in direct examination of the ventral aspect.

At present, the genus *Lucernuta* embraces the following species: *fenestrata* Germar, *hammari* McD., *minuta* Pic, *paraguayensis* McD., and *savignii* Kirby.

The courtesy of the British Museum (Natural History), through Miss C. M. F. von Hayek, in affording me an opportunity to examine the specimens of Kirby's species is very much appreciated.

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A Neglected Diagnostic Character of the Apoidea (Hymenoptera)

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Largely on the basis of thoracic structure, most writers have considered the bees (superfamily Apoidea) as most closely related to the digger wasps (superfamily Sphecoidea). An important difference between the two superfamilies is that the bees are specialized for gathering pollen, but since the males and the numerous parasitic bees lack the attendant pollen collecting structures, textbook keys for identification have been forced to rely on two rather obscure characters to differentiate the two groups: the few or many compound or branched hairs that are said to be invariably present somewhere on the body of the bee, and the broadened hind basitarsis. Sphecoid wasps have all the body hairs simple and have the hind basitarsis slender.